

B & V WASTE SCIENCE & TECHNOLOGY CORP.

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B&V Project 45256.001
August 1, 1991

Ms. Beth Brown
U. S. EPA Region IV
345 Courtland St. NE
Atlanta, GA 30365

Subject: Collierville Site
Risk Assessment Oversight
Comments

Dear Ms. Brown:

BVWST has reviewed the baseline risk assessment for the Collierville Site in Collierville, Tennessee. Comments on each major section of the risk assessment document are provided below.

Section 8.1 Introduction

It would be helpful if information about the sample collection procedures, locations, and depths were included, or at least referenced, in this section. At a minimum, references to Section 3.0 of the RI report should be included.

Section 8.2 Contaminants of Concern

Additional discussion on the criteria used to select and eliminate chemicals of potential concern should be provided. The RAGS guidance lists nine basic criteria that should be considered. The author mentions that detection frequency and concentration were considered; however, no discussion was provided concerning any thresholds that may have been used to determine what was significant. The reader would benefit from a data summary table that lists individual results, detection limits, frequency of detection, and arithmetic means for each detected constituent. Also, a table listing each contaminant and the rationale for either retaining or eliminating the compound from the quantitative risk assessment would be beneficial.

Section 8.3 Exposure Assessment

The author should more fully address the air pathway (i.e., reiterate the actual percentage of the site that is covered, mention that the contamination exists primarily in the subsurface soils). A discussion of the local meteorology (including average wind speeds) and the types of land cover in the unpaved areas should be included to determine the degree of dispersive mixing that is likely to occur on-site.

The demography and surrounding land use should be described in more detail. A brief discussion of soil characteristics and vegetative cover on-site should also be included.



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According to the RAGS guidance, exposure concentrations and chemical intakes should be included in this section. These calculations are provided in the risk characterization section of the report.

✓ Section 8.4 Toxicity Assessment

Definitions for reference dose and cancer potency factor should be provided.

✓ Section 8.5 Risk Characterization

Since most of the major contaminants of concern have MCLs, the author does not quantify potential risk associated with groundwater exposure through risk assessment scenarios. This is not the way EPA normally conducts risk assessments. Usually, the risk would still be quantified.

✓ The reader was unable to duplicate the numbers in Tables 8-10 and 8-11. What numbers were used as the soil contaminant levels - was an average calculated for the site or for "hot spots" on the site? If soil mean concentrations were based on the whole site, then the 95% upper confidence limit and one-half the detection limit of non-detects should have been applied. Explicit examples with correct equations/expressions should be provided with each table so the reviewer can reproduce the values provided in the risk assessment.

✓ The author should provide explicit sources and/or explanations of the selected assumptions and values in Figures 8-3 and 8-4.

- A lifetime cancer risk should be calculated for future residents in addition to the future child resident risk calculation.

These comments were discussed with Glenn Adams, EPA Region IV, on July 31, 1991. If you have any questions regarding the risk assessment comments, please do not hesitate to call me at (404) 392-9227.

Very truly yours,



Krista Jones
Environmental Scientist

cc: Robert Marbury